

Knowledge of the residents at King Abdul-Aziz University Hospital (KAAUH) about palliative care

Sultan H. Alamri

Department of Family and Community Medicine - Faculty of Medicine - King Abdul Aziz University, Jeddah, KSA

Address for correspondence: Dr. Sultan H. Alamri, Department of Family and Community Medicine - Faculty of Medicine - King Abdul Aziz University, Jeddah, KSA. E-mail: sulalamri@hotmail.com

ABSTRACT

Background: Palliative care is a rapidly growing subspecialty that aims at improving the quality of life and relieving suffering associated with life threatening disease. Despite its rapid growth and huge demand, the knowledge of health care professionals on palliative care remains inadequate. **Objective:** This study aims to determine the knowledge of residents at King Abdul-Aziz University Hospital (KAAUH) on palliative care. **Materials and Methods:** Through a cross-sectional design, all residents in the hospital were invited to complete a two-part self-administered questionnaire in June 2010. The first part of the questionnaire included variables describing the socio-demographic characteristics and educational background, and the second part developed by palliative care education initiative at Dalhousie University in Canada in 2000 had 25 items on the knowledge of palliative care. **Results:** Of the 80 residents 65 (81%) responded, the overwhelming majority of whom were Saudis (92.3%) with an equal representation of males and females. The mean age of the participants was 29.1 ± 2.4 years. Less than one-third (29.2%) indicated that they had previous didactic education on palliative care. The percentage of right answers on items reflecting knowledge on palliative care accounted for $29.9\% \pm 9.9\%$. No statistically significant difference was found in the level of knowledge among the residents according to their demographics or graduation and training characteristics. **Conclusion:** Resident physicians enrolled in postgraduate programs have suboptimal knowledge of basic palliative care. Substantial efforts should be made to incorporate a palliative care module into the theoretical and practical training of medical students and resident physicians.

Key Words: Knowledge, palliative care, residents, Saudi Arabia

INTRODUCTION

Palliative care is quite a recent specialty that was revived in 1967.^[1] It is defined by the World Health Organization (WHO) as an approach that improves the quality of life of patients and their families facing problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual.^[2] While cancer patients remain the largest group that receives palliative care, it is becoming increasingly recognized that people suffering

from chronic, progressive illnesses, which will eventually become terminal require same type of end of life care.^[3]

In the course of the development of palliative care, several associations and organizations have been founded around the world and several declarations made. One very important declaration was made at a meeting in Barcelona in 1995, when the European Association for Palliative Care declared that every individual had the right to pain relief, and that palliative care must be provided according to the principle of equity, irrespective of race, gender, social status, national origin, or the ability to pay for services. These recommendations form the thrust of what has become known as the Barcelona Declaration.^[4]

The level of palliative care services varies greatly in different countries. Significant progress has been made in some countries especially those with well-developed health systems. However, most countries in the world have a long way to go to improving palliative care for their people.^[5] In Saudi Arabia, the palliative care program, started in the

Access this article online	
Quick Response Code:	Website: www.jfcmonline.com
	DOI: 10.4103/2230-8229.102321

early 1990s at King Faisal Specialist Hospital (KFSHRC) in Riyadh, is thought to be the most developed program in the region, and can be considered a regional center of excellence providing palliative care for the entire region.^[6]

The Objectives of this study: To determine the knowledge of the residents working in King Abdul-Aziz University Hospital (KAAUH) about palliative care.

MATERIALS AND METHODS

Through a cross-sectional descriptive study, all residents working in all departments in KAAUH ($n = 80$) were personally invited to participate in the study. Written permission from the management was obtained before the conduct of the research. The questionnaires were to be distributed to the physicians with a personalized covering letter. All responses were to be kept confidential and were not to be disclosed except for study purposes.

A self-administered questionnaire was used to collect data from the respondents in June 2010. The first of this two-part questionnaire included variables describing socio-demographic characteristics and educational background. The second was developed by a palliative care education initiative at Dalhousie University in Canada in 2000 and comprised 25 items on the knowledge of palliative care. This part required the respondents to choose the single best answer from multiple options. The maximum possible score on the knowledge sub-scale was 25. The questionnaire had been proven to be both valid and reliable.^[7] All data were verified by hand and were coded and entered into a personal computer. Statistical Package for the Social Sciences (SPSS), version 16 was used for statistical analysis. The answers on the questions reflecting knowledge of the participants on palliative care were scored by giving 1 score for each correct answer. The total scores were tested for normality, and if distribution was normal, an independent t -test was used to compare two subgroups, and analysis of variance (ANOVA) test used to compare three or more subgroups. P value <0.05 was considered significant throughout the study. Means are presented as \pm one standard deviation.

RESULTS

The majority of the respondents were Saudis (92.3%), with nearly equal percentages of males (49.2%) and females (50.8%). The mean age was 29.1 ± 2.4 years, approximately two-thirds (66.2%) of whom had graduated less than 5 years before the study. The majority (70.8%) were graduates of King Abdul-Aziz University (KAU) and endorsed in the residency program. They were either sponsored by the faculty of medicine (36.9%), KAU hospital (26.2%), or by

other faculties (36.9%). Only 29.2% of the respondents indicated that they had received previous didactic teaching on palliative care.

The percentage of right answers on palliative care ranged between 0% and 60% with a mean value of $29.9\% \pm 9.9\%$. Although one-third of the physicians gave the right answers on the circumstances for increasing the dosage of opioids in colon cancer (35.4%), a much lower percentage (16.9%) knew the appropriate first line drug treatment for opioid induced nausea, and only 13.8% knew about the likelihood of opioid addiction as a result of cancer pain control. A small proportion (13.8%) of participants knew the first drug of choice for daily prophylaxis for constipation when using opioids, and the probable indication for the use of opioids for the treatment of cancer. A small number of physicians (9.2%) knew the primary reason for increasing the dose of opioids in patients with chronic cancer pain. The level of knowledge was highest in areas concerned with the explanation for increased doses of pain medication for terminal cancer patients, the impact of external beam radiotherapy in pain relief for bone metastasis and the appropriate response to the request of the family not to give the patient the 'bad news' to avoid negative psychological effect [Table 1].

There were no significant differences in the mean knowledge score among participants according to their demographic characteristics. Moreover, it was found that the reported previous education on palliative care was not associated with significant differences in the mean percentage of right answers between those who had previous training ($30.4\% \pm 9.9\%$) and those who had not ($29.1\% \pm 10.2\%$). Although residents working in internal medicine departments achieved higher knowledge scores than their colleagues, this difference was not statistically significant with other departments [Table 2].

DISCUSSION

Although the WHO Cancer Unit advocated the use of opioids in the early 1980s as a major intervention for cancer pain relief,^[8] our results revealed that the knowledge of our residents regarding opioid use as an important medication in palliative care was generally very low. The overall percentage of right answers recorded from our participants ($29.9\% \pm 9.9\%$) was considerably low. A similar level of knowledge on palliative care has been documented for physicians in the USA who care for patients with diminished mental capacity who are critically ill.^[9] However, a German study using a different questionnaire, indicated a higher percentage of knowledge in prehospital emergency physicians. There were, on the average, 10.8 (43.3%)

questions (SD \pm 5.7, range 2–24) answered correctly.^[10] This variation could be attributed to the differences in the study design, the assessment tools used or the presence of specialized team with better knowledge in palliative care.

Physicians' lack of knowledge on palliative care was discussed in a study conducted in India. The two reasons given are (a) the lack of knowledge about the nature of the end-stage of some clinical cases such as cancer pain and (b) the lack of education, which accounts for the meager knowledge about palliative care.^[11]

Our findings revealed that the length of time since graduation had no significant effect on the knowledge scores. These findings are dissimilar from observations made on prehospital emergency physicians in Germany,

where it was found that physicians with professional experience of less than 5 years answered statistically significantly more questions correctly. There were two reasons for this. The first is that since the introduction of palliative care in the undergraduate curriculum was recent, those whose experience was less than 5 years had this type of didactic teaching, which had not been available to those who had graduated 5 or more years before. The second reason is the claim that palliative care was not sufficiently covered in the continuous medical education program. Therefore, it was recommended that more attention should be paid to education on pain therapy and end-of-life care.^[10]

In a German report, academic training was said to have a positive impact on the knowledge of future physicians

Table 1: Responses of the participants to the items reflecting their knowledge about palliative care

Items reflecting knowledge about palliative care	Percentage of right answers (%)
The most likely explanation for a terminal cancer patient to request increased doses of pain medication	60
External beam radiation to focal painful bone metastases results in moderate excellent pain relief for up to 3 months following radiation	60
The appropriate response to the request of the family not to tell the patient 'bad news' to avoid negative psychological effect	58.5
Care of an old woman with lung cancer metastases who is not benefitting from different chemotherapy regimen including hormonal therapy	53.8
The best help for a woman who weeps on realizing that symptom control was the only possible treatment for her end stage colon cancer	50.8
Time for fentanyl patch to reach peak plasma concentration	43.1
Pain that is described as a dull ache well-localized over a bone metastases is an example of:	43.1
Approximate percentage of cancer patients with metastatic disease who suffer from chronic pain	41.5
Most useful combinations of two classes of drugs for treating terminal dyspnea	40.0
Suggested treatment for moderate pain for a woman with infiltrating breast cancer on an infusion of morphine	36.9
Circumstances for not increasing the dose of opioids for a woman with colon cancer and bone metastasis, lobe infiltrate, dyspnea, and hypoxia	35.4
Probable diagnosis for a woman with widespread bone metastasis from breast cancer who has of late been having more pain, is thirsty, has frequent urination, is sleeping more than usual, is lethargic with no local neurologic deficits	33.8
Appropriate treatments of terminal delirium	30.8
Appropriate emergency treatment for a patient with multiple myeloma, vertebral infiltration without collapse and has severe intolerable pain	30.8
The drug treatment of choice for the 'death rattle'	26.2
Appropriate first-line drug treatments for opioid induced nausea	16.9
Appropriate therapy for a woman admitted to the hospital with rapidly progressing disease who has become withdrawn, has poor eye contact, and is rather quiet	14.6
Likelihood of the development of opioid addiction as a result of cancer pain treatment	13.8
First choice daily prophylaxis for constipation resulting from prescribed opioids	13.8
The probable indication for a cancer patient receiving opioids for pain who complains of increasing pain	13.8
Appropriate dose of oral morphine for the above patient after being discharged	12.3
The primary reason for not increasing the dose of opioids in a patient with chronic cancer pain	9.2
Appropriate intervention for a distressed breathless child in the last days of life	0.0
The stage of disease that necessitates the maximum narcotic analgesic therapy for the treatment of severe pain	0.0
Probable diagnosis for a woman complaining of weight loss and who is very tearful 4 months after the death of her husband after a protracted illness	0.0

Table 2: A comparison of achieved percentage of right answers on palliative care among participants in relation to their characteristics

Characteristics	Mean	SD	P value
Nationality			
Saudi	30.2	10.1	0.519
NonSaudi	27.2	9.2	
Gender			
Males	28.0	9.1	0.115
Females	31.8	10.4	
Age			
<30 years	29.6	9.9	0.703
30+ years	30.6	10.1	
Time since graduation			
<5 years	29.5	9.8	0.588
5+ years	30.9	10.2	
University of graduation			
King Abdul-Aziz University (KAU)	30.8	10.0	0.307
Others	27.0	9.6	
Type of residency			
Residency program	29.9	9.7	0.944
Service residency	30.1	10.7	
Previous instruction on palliative care			
Yes	30.4	9.9	0.935
No	29.1	10.2	
Specialty			
Internal medicine	34.0	11.1	0.228
Surgery	29.7	5.1	
Emergency	29.3	13.0	
Others	28.0	9.1	
Sponsor			
Faculty of medicine	28.5	9.7	0.583
KAU hospital	29.9	9.3	
Others	31.5	10.6	

about palliative care.^[12] However, our findings revealed that there was no significant difference in the knowledge of our physicians according to their history of training. That their previous training was not reflected in the scores of the participants might in fact, be due to the small sample size or inaccuracy of reporting. It may also be due to the poor quality and/or amount of the training material. In general, undergraduate education and training on palliative care will be inadequate for the future practice of physicians unless it is supplemented with regular postgraduate continuous medical education.

Moreover, it was expected that the residents who are working in internal medicine, emergency, and surgery would have significantly better knowledge than their colleagues in other departments (e.g., dermatology, ophthalmology, etc.). This is based on the assumption that patients in the

terminal state of illness and in need of palliative care are usually seen in one of these three specialties. However, our study revealed that the scores of the residents in these departments were not significantly better.

CONCLUSION

Resident physicians enrolled in postgraduate programs have less than adequate knowledge of basic palliative care. Substantial efforts should be made to incorporate a module on palliative care in theoretical and practical training of medical students and resident physicians.

ACKNOWLEDGMENTS

I am heartily thankful to my supervisor, Dr. Mahdi Qadi for his encouragement and guidance. I also offer my regards and blessings to my advisor Dr. Muhammad Alshahri for his golden advice and valuable comments.

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How to cite this article: Alamri SH. Knowledge of the residents at King Abdul-Aziz University Hospital (KAAUH) about palliative care. J Fam Community Med 2012;19:194-7.

Source of Support: The project is self funded., **Conflict of Interest:** No detectable conflicting interest.